

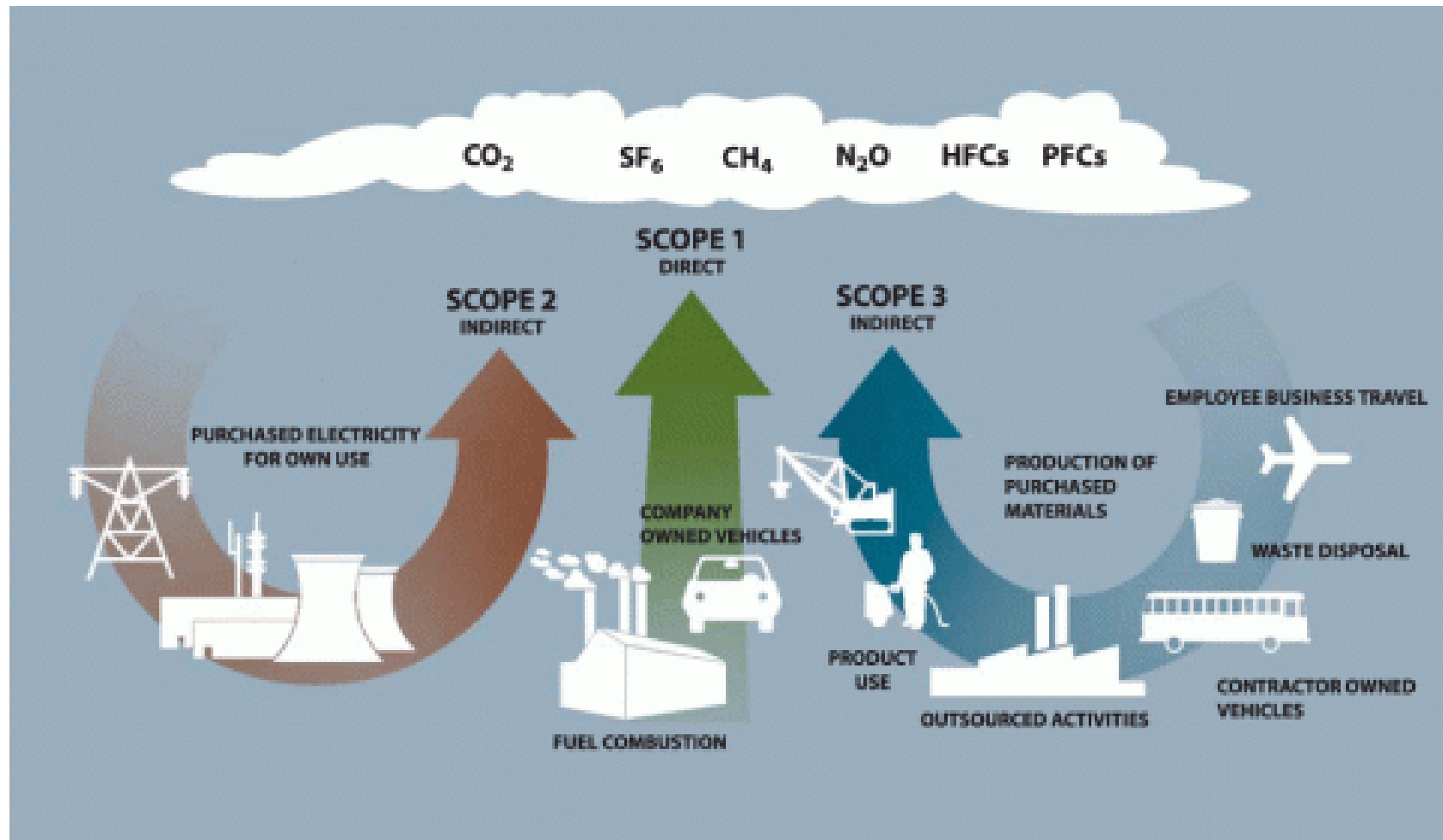


Pacific Northwest Pollution Prevention Resource Center

# Resources and Tools for Implementing an Energy Efficiency Program

Greenhouse Gas Emissions Training  
Idaho Department of Environmental Quality  
May 6, 2010

# Scope of Emissions



# EPA Climate Leaders

- Climate Leaders works with companies to develop a long-term GHG management strategy
- Key elements:
  - Requires a company-wide inventory
    - Direct and indirect emissions (e.g., purchased electricity)
    - Aggregate of all company US emissions...
    - ...vs the GHG rule, which is facility-based & Scope 1
  - Preparation of an Inventory Management Plan
  - Companies set aggressive 5-10 y
  - Annual reporting to EPA



<http://www.epa.gov/stateply/index.html>

# Climate Leader *Achievements*

## Sampling of GHG Reductions

**3M** achieved its initial goal by reducing total U.S. GHG emissions by 60 percent from 2002 to 2007.

**Advanced Micro Devices, Inc.** pledges to reduce global GHG emissions by 33 percent per manufacturing index from 2006 to 2010. AMD achieved its initial goal by reducing global GHG emissions by 53 percent per manufacturing index from 2002 to 2006.

**American Electric Power** pledges to reduce total U.S. GHG emissions by 6 percent from 2001 to 2010. American Electric Power achieved its initial goal by reducing total U.S. GHG emissions by 4 percent from 2001 to 2006.

**Anheuser-Busch** pledges to reduce total U.S. GHG emissions by 15 percent from 2008 to 2013. Anheuser-Busch achieved its initial goal by reducing total U.S. GHG emissions by 10 percent from 2005 to 2010.

## Aggressive Targets *Work*

- These are GHG emission reductions *already achieved!*
- These companies have moved on to make new commitments
- Every business has a different profile and a different opportunity...

# Climate Leader *Achievements, %/yr*

**3M** achieved its initial goal by reducing total U.S. GHG emissions by 12.0 percent from 2002 to 2007.

**Advanced Micro Devices, Inc.** pledges to reduce global GHG emissions by 33 percent per manufacturing index from 2006 to 2010. AMD achieved its initial goal by reducing global GHG emissions by 13.3 percent per manufacturing index from 2002 to 2006.

**American Electric Power** pledges to reduce total U.S. GHG emissions by 6 percent from 2001 to 2010. American Electric Power achieved its initial goal by reducing total U.S. GHG emissions by 0.8 percent from 2001 to 2006.

**Anheuser-Busch** pledges to reduce total U.S. GHG emissions by 15 percent from 2008 to 2013. Anheuser-Busch achieved its initial goal by reducing total U.S. GHG emissions by 2.0 percent from 2005 to 2010.

**Bank of America Corporation** achieved its initial goal by reducing total U.S. GHG emissions by 2.6 percent from 2004 to 2009.

**Baxter International Inc.** pledges to reduce total U.S. GHG emissions by 5 percent from 2005 to 2012. Baxter achieved its initial goal by reducing U.S. GHG emissions by 5.4 percent per unit of production value from 2000 to 2005.

**Caterpillar Inc.** pledges to reduce total global GHG emissions by 3 percent from 2006 to 2015. Caterpillar achieved its initial goal by reducing global GHG emissions by 7.0 percent per dollar revenue from 2002 to 2006.

**Eastman Kodak Company** achieved its initial goal by reducing total global greenhouse gas emissions by 10 percent from 2000 to 2006.

**Gap, Inc.** achieved its initial goal by reducing U.S. greenhouse gas emissions by 4.0 percent per square foot from 2003 to 2008.

**General Motors Corporation** pledges to reduce total North American GHG emissions by 40 percent from 2000 to 2010. General Motors achieved its initial goal by reducing total North American GHG emissions by 4.6 percent from 2000 to 2005.

**Hasbro, Inc.** achieved its initial goal by reducing total U.S. GHG emissions by 6.1 percent from 2000 to 2007.

**IBM Corporation** pledges to reduce total global GHG emissions by 7 percent from 2005 to 2012. IBM achieved its initial goal by reducing total global energy-related GHG emissions by an average of 6 percent per year and PFC emissions by 58 percent from 2000 to 2005.

**Mack Trucks, Inc.** pledges to reduce U.S. GHG emissions by 12 percent per unit produced from 2007 to 2012. Mack Trucks achieved its initial goal by reducing U.S. GHG emissions by 8.0 percent per unit produced from 2003 to 2007.

**MillerCoors** pledges to reduce total U.S. GHG emissions by 8 percent from 2008 to 2015. Coors Brewing Company achieved its initial goal by reducing U.S. GHG emissions by 4.0 percent per production index by 2010 using a 2005 base year.

**National Renewable Energy Laboratory** pledges to reduce total U.S. GHG emissions by 75 percent from 2005 to 2009. NREL achieved its initial goal by reducing U.S. GHG emissions by 2.0 percent per square foot from 2000 to 2005.

**Pfizer Inc.** pledges to reduce total global GHG emissions by 10 percent from 2000 to 2006.

**Raytheon Company** pledges to reduce total U.S. GHG emissions by 10 percent from 2008 to 2015. Raytheon Company achieved its initial goal by reducing U.S. GHG emissions by 6.3 percent per dollar revenue from 2002 to 2008.

**Roche Group U.S. Affiliates** pledges to reduce total U.S. GHG emissions by 13 percent from 2008 to 2013. Roche achieved its second goal by reducing total U.S. GHG emissions by 2.2 percent from 2001 to 2010. Roche achieved its initial goal by reducing total U.S. GHG emissions by 3.4 percent from 2001 to 2006.

**SC Johnson** pledges to reduce total U.S. GHG emissions by 8 percent from 2005 to 2010. SC Johnson achieved its initial goal by reducing total U.S. GHG emissions by 3.4 percent from 2000 to 2005.

**Shaklee** achieved its initial goal by maintaining net zero U.S. GHG emissions from 2006 to 2009 using a 2004 base year.

**St. Lawrence Cement** pledges to reduce global GHG emissions by 20 percent per ton of cementitious product from 2000 to 2012. St. Lawrence Cement achieved its initial goal by reducing global GHG emissions by 2.7 percent per ton of cementitious product from 2000 to 2006.

**Sun Microsystems, Inc.** pledges to reduce total global GHG emissions by 2 percent from 2007 to 2015. Sun Microsystems achieved its initial goal by reducing total U.S. GHG emissions by 4.6 percent from 2002 to 2007.

**United Technologies Corporation** pledges to reduce total global GHG emissions by 12 percent from 2006 to 2010. United Technologies achieved its initial goal by reducing global GHG emissions by 9.2 percent per dollar revenue from 2001 to 2006.

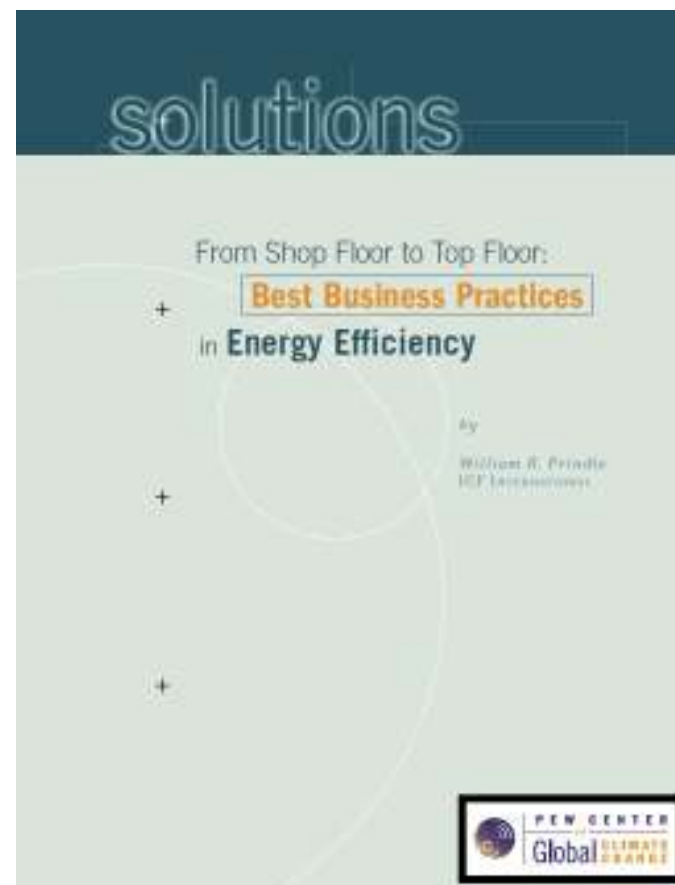
# EPA Climate Leaders

- Inventory Design Guide
  - Great resource on technical aspects of the inventory process
  - <http://www.epa.gov/climateleaders/resources/design-principles.html>
  - Sector guidance available, for example, for MSW landfills
    - [http://www.epa.gov/climateleaders/documents/resources/protocol-solid\\_waste\\_landfill.pdf](http://www.epa.gov/climateleaders/documents/resources/protocol-solid_waste_landfill.pdf)
- Case studies
  - Typically 20-30 pp on individual company efforts to reduce emissions
  - <http://www.epa.gov/climateleaders/casestudies/index.html>
- Information on Offsets & Green Power
  - <http://www.epa.gov/stateply/resources/optional-module.html>
- Program on Climate Leaders for Small business
  - [http://www.energystar.gov/index.cfm?c=small\\_business.sb\\_index](http://www.energystar.gov/index.cfm?c=small_business.sb_index)
- Recent Webinars (full media files, not dis-embodied PDFs!)
  - For Small Businesses: Using the Climate Leaders Simplified GHG Calculator to Develop your Inventory
  - Carbon Offsets
  - Overview of Goal Setting for Greenhouse Gas Reductions
  - Understanding How to Purchase Renewable Energy Certificates (RECs)

# Pew Study on Best Practices

## Seven Habits of Highly Efficient Companies – April 2010

- Efficiency is a core strategy
- Leadership & organizational support is real & sustained
- Company has SMART energy efficiency goals
- Strategy relies on a robust tracking & measurement system
- Organization puts substantial resources into efficiency
- Energy efficiency strategy shows demonstrated results
- Company effectively communicates efficiency results



# Observations from Pew Study

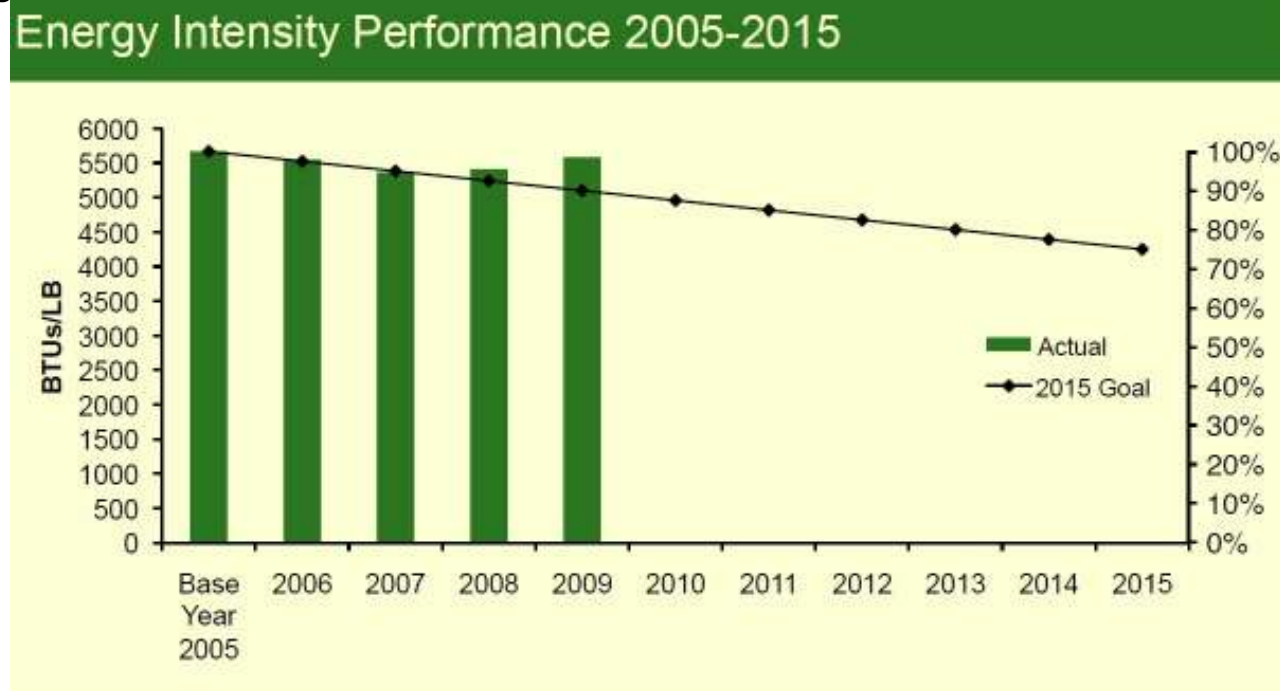
- Common Challenges
  - Funding
  - Lack of staff time and expertise to develop projects
  - Insufficient technical information
  - Organization disconnects & split incentives
- Common Surprises
  - Unanticipated employee interest & enthusiasm
  - Speed with which program developed
- Successful energy efficiency strategies “*break down walls between functional units, business units, and other organizational domains...*”

## Results Motivated by Aggressive Energy Focus

- Toyota Motor Engineering & Manufacturing
  - Traditional model
    - Facilities focused on running utility plants
    - Production focused on building vehicles
    - Groups physically & organizationally isolated
  - Energy focus led to re-think of old paradigms
    - Large centralized boilers with long pipelines replaced by smaller hot water boilers close to production units
    - Allowed lower operating temperatures and pressures
    - Reduced heat losses from long pipe runs
    - Generated large energy savings

# Set Big Hairy Audacious Goals

- If you know exactly how to get there, it probably means the goal is not challenging enough
- Challenging goals can be a rallying point, harnessing employee enthusiasm
- Audacious energy efficiency goals drive progress in other areas of business

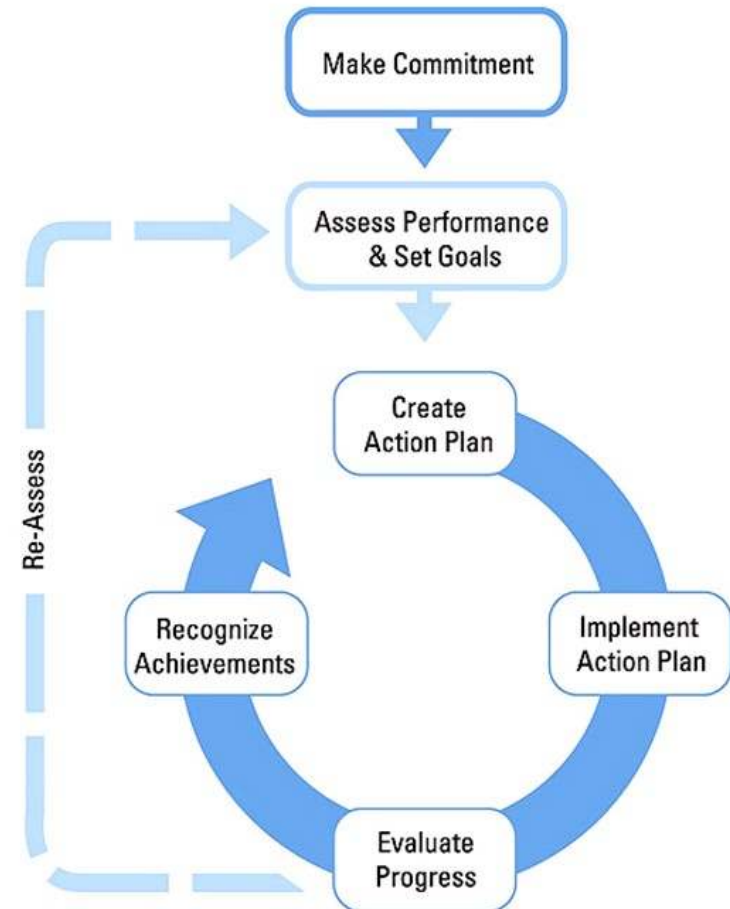


Dow has a goal to achieve by 25% reduction in energy intensity by 2015

# ENERGY STAR Resources

- Guidelines for Energy Management
  - How to develop an energy program at your company
- Teaming Up to Save Energy
  - How to structure, launch, & maintain an energy team
- Industrial Product & Services Directory, w/case studies
- Portfolio Manager

ENERGY STAR Guidelines For Energy Management



# ENERGY STAR Portfolio Manager

- Commercial buildings offer a 30% opportunity to reduce energy use (DOE)
  - and energy is the largest operating cost in commercial buildings
- Online tool to assess your building's energy performance (also water usage) – for portfolios of one to 100+ facilities
- Based on building characteristics
  - Space types, SF, occupancy, hours of operation, # of PC's, utility bills, etc.
- Key result is your “Score,” from 0-100
  - Weather-normalized and standardized metrics
    - Based on benchmark data for than 80,000 facilities
  - 75 or better qualifies for ENERGY STAR labeling
  - Also facility “Energy Intensity” (kBtu/sq. ft./yr)
  - GHG emissions (MtCO<sub>2</sub>e/yr)
- Related online tools:
  - Target Finder – works WITH Portfolio Manager. Set an energy reduction target and Target Finder will identify design solutions required to reach your goal
  - Financial calculators
    - Building value upgrade calculator, Financial value calc., Cash flow opportunity calculator
- Free online interactive training & webinars

# DOE Industrial Technologies Program



The Industrial Technologies Program (ITP) leads the national drive to reduce energy intensity and carbon emissions by changing the way industry uses energy. ITP sponsors cost-shared R&D, and supports the use of today's advanced technologies and energy management best practices.

## Industrial Technology R&D ▶

Learn about technology breakthroughs:

- By [industry](#)
- By [crosscutting](#) technologies
- Available today and emerging ([PDF 3.7 MB](#)) [Download Adobe Reader](#).

## Save Energy Now® ▶

Target opportunities to start saving energy and money:

- In your [industrial plant](#)
- In your [data center](#)
- Through your [state](#)
- With your [utility](#)
- By applying ANSI-ISO [standards](#)

## Technology Delivery ▶

Apply proven methods to boost efficiency and productivity in your [compressed air](#), [motor-driven](#), [process heating](#), and [steam](#) systems by using:

- [Software assessment tools](#)
- [Technical publications](#)
- [Training](#)
- [Qualified Specialists](#)

<http://www1.eere.energy.gov/industry/>



# DOE ITP Resources

**Industrial Technologies Program**  
[About the Program](#) [Program Areas](#) [Information Resources](#) [Financial Opportunities](#) [Technologies](#) [Deployment](#) [Home](#)

## BestPractices

[Printable Version](#)

**About BestPractices**  
**Resources**  
**Opportunities**  
**For Corporate Executive**  
**For Plant Management**  
**For Technical**  
**For General Public**



BestPractices, under the DOE Industrial Technologies Program, works with U.S. industry to implement energy management practices in industrial plants. To meet the diverse needs of U.S. industry, BestPractices provides a number of resources for corporate executives, plant managers, technical staff, and the general public. We invite you to join the many U.S. companies that are saving energy and money and improving productivity right now. Not sure where to start? [Learn more.](#)

**The Quick Plant Energy Profiler - Now Available**

The Quick Plant Energy Profiler, or Quick PEP, is an online software tool that helps industrial plant personnel quickly understand how energy is being used at their plant and how they might save energy and money. [Learn more.](#)

**Save Energy Now**

Save Energy Now helps American businesses, factories, and manufacturing facilities save energy and continue to thrive despite diminished energy supplies and rising energy costs.


- [Save Energy Now](#)
- [Save Energy in Your Data Center Now](#)
- [Results](#)
- [Partner with DOE](#)
- [Energy Savings Assessments](#)

**Energy System Links**

- [Steam](#)
- [Process Heating](#)
- [Motors, Pumps, and Fans](#)
- [Compressed Air](#)

**Quick Links**

- [Energy Matters](#)
- [Training](#)
- [Industrial Assessment Centers](#)
- [Software Tools](#)
- [Qualified Specialists](#)
- [Plant Assessments](#)

**BestPractices Publications**

Whether you're looking for information on how to recover waste

**For Corporate Executive**  
**For Plant Management**  
**For Technical**  
**For General Public**

# DOE ITP Resources – Technical

## For Technical



Recognizing the high level of technical complexity and variances occurring in plants, ITP has created tools and resources specifically designed to meet this need. Whether you are an engineer, consultant, researcher, or plant technician – you can find the resources and tools to get the job done.

### Get Involved ▶

- [Solicitations](#)
- [Industrial Assessment Centers](#)

### Professional Development ▶

- [Training](#)
- [Software](#)
- [Qualified Specialists](#)
- [Energy Management](#)

### Latest Advancements ▶

- [Emerging Technologies](#)
- [Crosscutting Technologies](#)
- [R&D Results](#)

### Energy Information ▶

- [Footprint Studies](#)
- [Industry Profiles](#)
- [Databases](#)

### Industrial Energy Systems ▶

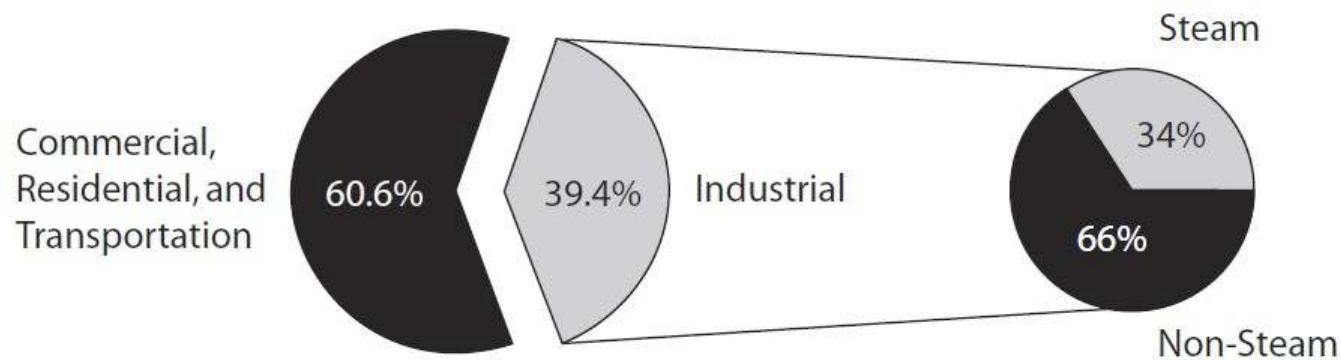
- [Motors, Pumps & Fans](#)
- [Steam](#)
- [Compressed air](#)
- [Process heating](#)

[http://www1.eere.energy.gov/industry/bestpractices/for\\_technical.html](http://www1.eere.energy.gov/industry/bestpractices/for_technical.html)

# Importance of Steam

- Steam use accounts for 34% of all industrial energy use (fuel + electric)
- 70% of industrial purchased **fossil fuel** goes to the production of steam!

## STEAM USE



Source: Best Practices Steam Overview, [http://www1.eere.energy.gov/industry/bestpractices/pdfs/steam\\_overview.pdf](http://www1.eere.energy.gov/industry/bestpractices/pdfs/steam_overview.pdf)

# DOE ITP Steam Resources

## Steam

Over 45% of all the fuel burned by U.S. manufacturers is consumed to raise steam. Steam is used for building heat and electricity generation. Many manufacturing facilities can recapture steam and be considered to optimize energy and cost savings. Such as: ([Download Adobe Reader](#))

- [Steam Generation through cogeneration applications, boiler controls, and water treatment](#)
- [Steam Distribution through checking steam leaks, installing insulation and proper piping](#)
- [Steam End Use through heat exchanger maintenance](#)
- [Steam Recovery through condensate return](#)

## Steam Case Studies

- J.R. Simplot: Burner Upgrade Project Improves Performance and Saves Energy at

## Steam Tip Sheets

26 steam tip sheets

- Click [here](#) for a complete list of steam system tip sheets.

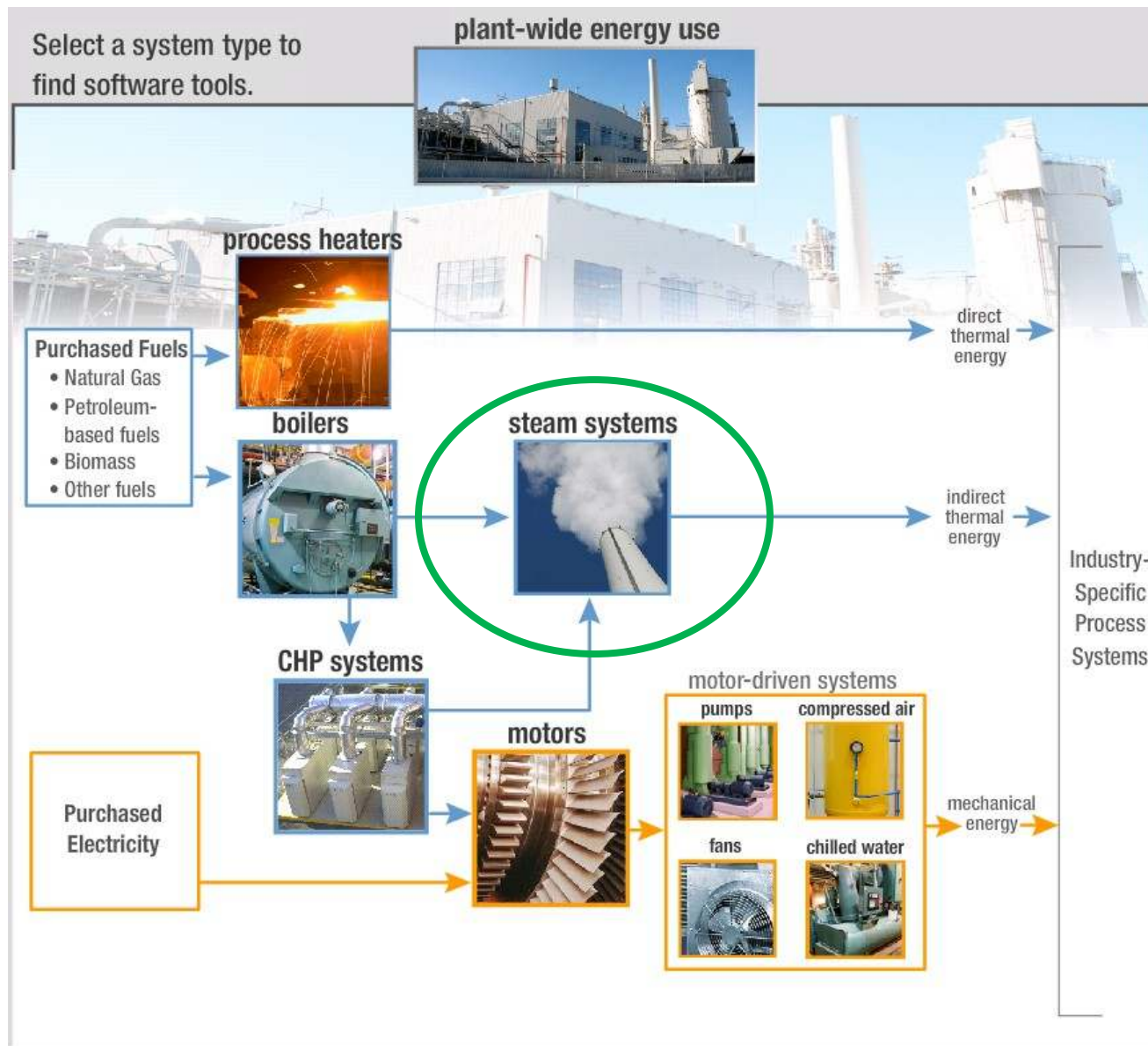
## Technical Publications

- Achieve Steam System Excellence: Industrial Technologies Program BestPractices
- Steam System Opportunity Assessment for the Pulp and Paper, Chemical Manufacturing
- Main Report: ([PDF 1.3 MB](#))
- Appendices: ([PDF 2.4 MB](#))
- [Steam Digest: Volume IV \(2003\): A compendium of articles published on steam system management](#)
- [Steam Digest 2002: A compendium of articles published on steam system management](#)

more  
↓

<http://www1.eere.energy.gov/industry/bestpractices/steam.html>

# DOE-ITP Software Tools

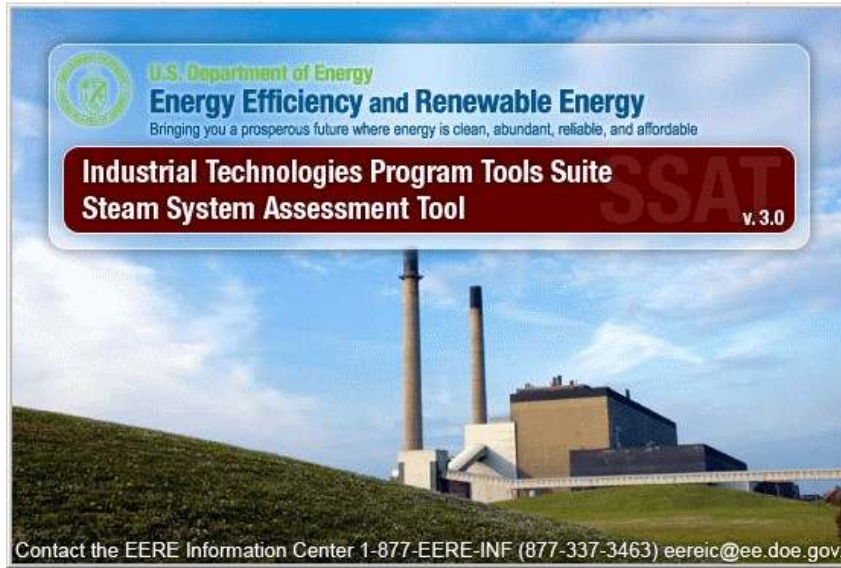


# Steam System Scoping Tool

- Quick tool to assess improve. opportunities
- Self-assessment against best practices
- Includes questions on:
  - Steam system operating practices
  - Boiler operation
  - Recovery operation
- IDs good places for further study



# Steam System Assessment Tool



- Utilizes a simplified model of your steam system
- Allows tests of various improvement scenarios
- Incorporates your cost/operating data to generate estimates of:
  - Energy savings
  - Cost savings
  - Emission reductions

# 3E+ Insulation Tool

- Calculates the impact of insulation type and properties on energy losses...
- ...estimates cost of improvements and...
- ...potential impact of changes in insulation on:
  - Energy losses
  - Energy cost
  - Emissions



# Industrial Assessment Database

- Results from 14,549 plant energy assessments
- Database includes information on:
  - Type of facility assessed
    - size, industry, energy usage, etc.
  - Details of resulting recommendations
    - type, energy & dollars savings, etc.
  - Searchable by SIC or NAICS code
  - Downloadable
  - <http://iac.rutgers.edu/database/index.php>

# IAC Database Results

- Top Ten IAC Recommendations

| #  | Description                                                   | Times Rec'd | Average Savings | Average Cost | Average Payback | Imp Rate |
|----|---------------------------------------------------------------|-------------|-----------------|--------------|-----------------|----------|
| 1  | Utilize Higher Efficiency Lamps And/or Ballasts               | 10368       | \$5,430         | \$10,708     | 1.97            | 53.21%   |
| 2  | Eliminate Leaks In Inert Gas And Compressed Air Lines/ Valves | 6477        | \$5,499         | \$1,271      | 0.23            | 76.89%   |
| 3  | Use Most Efficient Type Of Electric Motors                    | 4952        | \$4,623         | \$10,754     | 2.33            | 61.87%   |
| 4  | Install Compressor Air Intakes In Coolest Locations           | 4559        | \$1,735         | \$763        | 0.44            | 46.33%   |
| 5  | Utilize Energy-efficient Belts And Other Improved Mechanisms  | 3788        | \$3,130         | \$2,278      | 0.73            | 53.54%   |
| 6  | Reduce The Pressure Of Compressed Air To The Minimum Required | 3368        | \$3,519         | \$1,047      | 0.3             | 45.96%   |
| 7  | Insulate Bare Equipment                                       | 3114        | \$6,210         | \$3,491      | 0.56            | 46.21%   |
| 8  | Use More Efficient Light Source                               | 2982        | \$4,884         | \$8,579      | 1.76            | 50.40%   |
| 9  | Install Occupancy Sensors                                     | 2963        | \$1,963         | \$1,955      | 1               | 31.02%   |
| 10 | Analyze Flue Gas For Proper Air/fuel Ratio                    | 2141        | \$7,975         | \$2,291      | 0.29            | 66.42%   |

# IAC Database Results

- Top Ten IAC Recommendations based on Implementation Rate

| #  | Description                                                   | Average Savings | Average Cost | Average Payback | Imp Rate |
|----|---------------------------------------------------------------|-----------------|--------------|-----------------|----------|
| 1  | Establish A Predictive Maintenance Program                    | \$8,898         | \$1,344      | 0.15            | 86.75%   |
| 2  | Repair Leaks In Lines And Valves                              | \$11,776        | \$1,957      | 0.17            | 79.25%   |
| 3  | Eliminate Leaks In Inert Gas And Compressed Air Lines/ Valves | \$5,499         | \$1,271      | 0.23            | 76.89%   |
| 4  | Keep Equipment Clean                                          | \$14,501        | \$9,553      | 0.66            | 75.00%   |
| 5  | Repair And Eliminate Steam Leaks                              | \$101,958       | \$4,456      | 0.04            | 74.73%   |
| 6  | Repair Or Replace Steam Traps                                 | \$38,249        | \$6,837      | 0.18            | 73.93%   |
| 7  | Clean And Maintain Refrigerant Condensers And Towers          | \$5,004         | \$13,250     | 2.65            | 72.73%   |
| 8  | Cross-train Personnel To Avoid Lost Time                      | \$68,677        | \$19,702     | 0.29            | 71.43%   |
| 9  | Eliminate Leaks In Water Lines And Valves                     | \$5,403         | \$4,153      | 0.77            | 71.24%   |
| 10 | Maintain Machines With To Reduce Leaks                        | \$10,950        | \$2,809      | 0.26            | 71.05%   |

# Webinar

- Upcoming Online and In-Person Trainings

| Date         | Location                  | Event                                                                                                                                                        |
|--------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5/6/2010     | Webcast                   | Easy Ways to Save Energy Now - Take Care of those <b>Steam Traps</b><br><b>Fundamentals of Compressed Air Systems WE (web-edition; 1 of 4 sessions) (\$)</b> |
| 5/14/2010    | Interactive Web (\$)      |                                                                                                                                                              |
| 5/20/2010    | Stockton, California      | Steam Systems Management                                                                                                                                     |
| 5/24-26/2010 | Atlanta, Georgia          | <b>Specialist Qualification: Steam Systems (\$)</b>                                                                                                          |
| 5/26/2010    | Oak Brook, Illinois       | <b>Fundamentals of Compressed Air (Level 1) (\$)</b>                                                                                                         |
| 5/26/2010    | Corpus Christi, Texas     | <b>Fundamentals of Compressed Air (Level 1) (\$)</b>                                                                                                         |
| 5/27/2010    | Corpus Christi, Texas     | <b>Steam Systems Management (\$)</b>                                                                                                                         |
| 6/8-10/2010  | Morgantown, West Virginia | <b>Specialist Qualification: Process Heating (\$)</b>                                                                                                        |

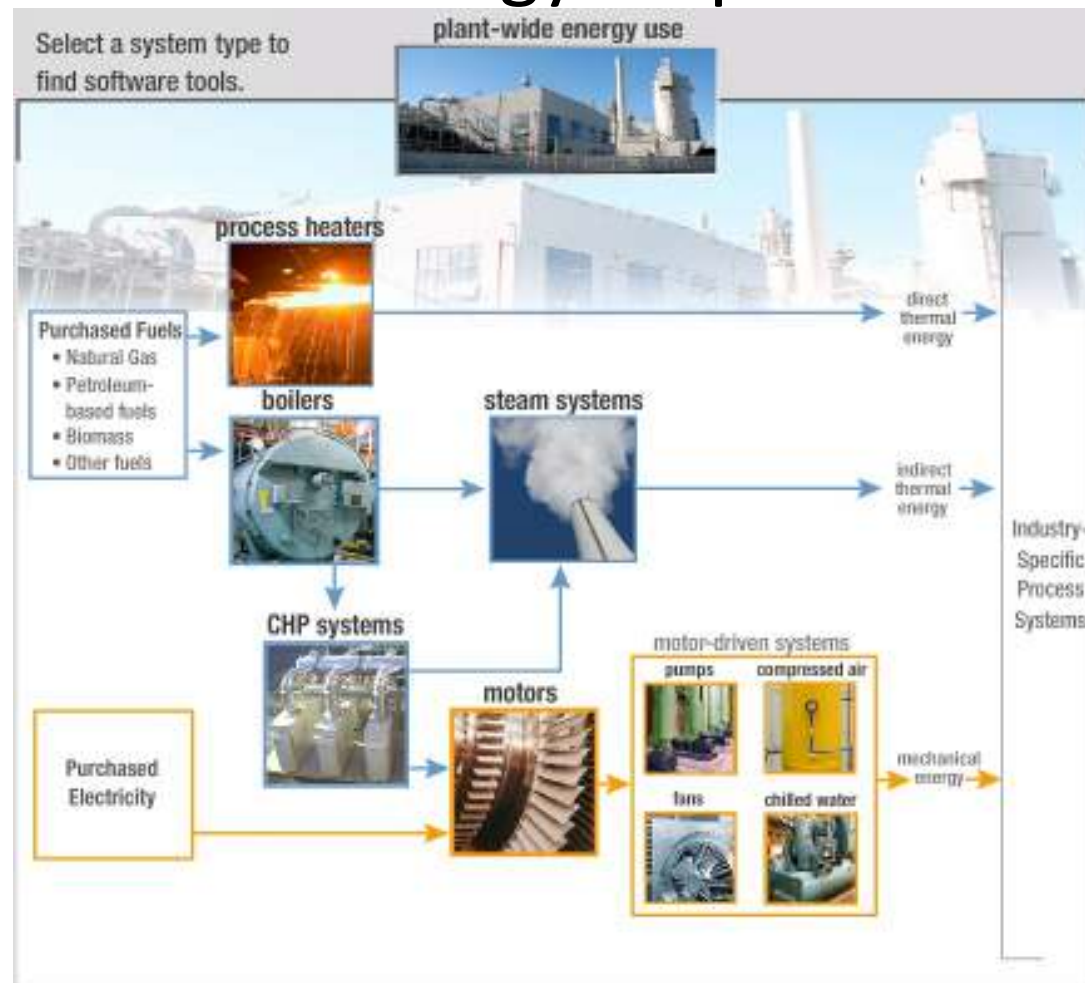
- Events also in preparation for Idaho (Fall 2010)

# Qualified Steam Tool Specialists

- Requires completion of training in:
  - Steam System Assessment Tool
  - Steam System Scoping Tool
  - 3E-Plus Insulation Tool
- “Available” to assist industrial steam tool users
- Idaho steam tool specialists:
  - 3 (or more) employed by Simplot
  - 1 employed by Spirax Sarco
- Locator:  
[http://www1.eere.energy.gov/industry/bestpractices/qualified\\_specialists/tool.cfm?software\\_id=4#find](http://www1.eere.energy.gov/industry/bestpractices/qualified_specialists/tool.cfm?software_id=4#find)

# DOE-ITP Resources

- A similar wealth of resources available for other industrial energy emphasis areas



## Other Opportunities

- Some additional resources listed in the resource handout for today
  - Landfill
  - Green Fleet

*Now, from the theoretical to the real...*

## Resources - Idaho & Pacific NW

# DOE “Save Energy Now” Assessments

- Large Plants may be eligible for a 3-day assessment by a DOE Energy Expert
  - Requirements:
    - >0.5 TBtu energy use (~\$3MM annual energy bill)
    - Significant potential for implementing improvements
  - Others may qualify under special circumstances
- Emphasis on *Save Energy Now LEADER* companies who commit to reduce energy intensity by 25% in 10 years
- Follow-up funding now under development
- <http://www1.eere.energy.gov/industry/saveenergynow/assessments.html>

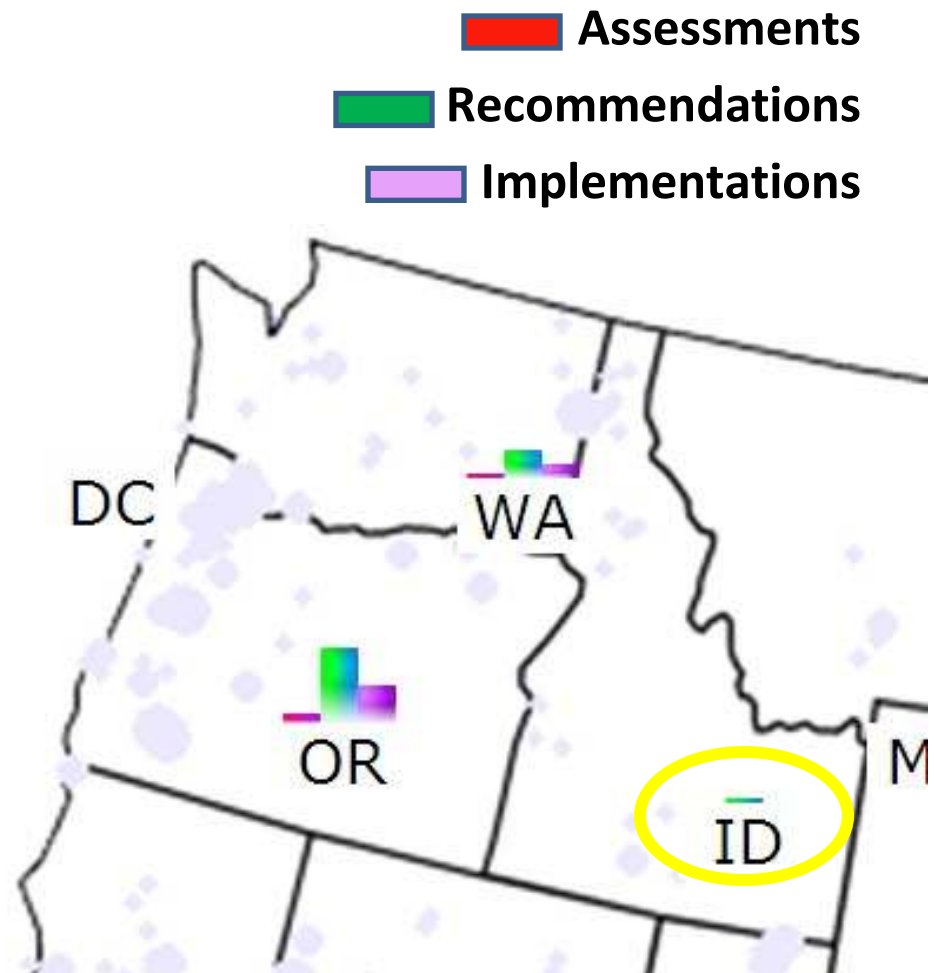
# Save Energy Now Assessments - Idaho

- Aberdeen
  - J.R. Simplot: Food processing; process heating assessment
- Boise
  - Micron Technology: General manufacturing; steam assessment
- Lewiston
  - Potlatch Corporation: Forest products; steam assessment
- Nampa
  - Amalgamated Sugar: Food processing; steam assessment
  - J.R. Simplot: Food processing; compressed air & steam assessments
- Pocatello
  - J.R. Simplot - Don Plant: Chemical; steam assessment
  - Plant recognized as an **Energy Saver Plant** for having more than 75,000 MMBtu total energy savings or for reducing total energy use by more than 7.5%
- W of City Caldwell
  - J.R. Simplot: Food processing; compressed air, steam & process heating assessments

# Industrial Assessment Centers

## Small- to Medium-Sized Plants eligible for 1-day Energy Assessments

- Requirements:
  - Sales < \$100 million
  - < 500 Employees
  - \$100K < Ann. energy bills < \$2MM
  - No professional in-house staff to do assessment
- Within 60 days, report on analysis, findings, & recommendations
  - Follow-up calls from DOE to track implementation
- IACs potentially available for Save Energy Now or other assessments
  - <http://www1.eere.energy.gov/industry/bestpractices/iacs.html>



# DOE Expert Energy Consultations

- All plants eligible for support by phone & email
- Considerable expertise available to respond
  - Problems considered in daily expert panel
  - Customized responses regularly occur
- Contact Info
  - Phone
    - 1-877-EERE-INF (1-877-337-3463).
  - Webmail form
    - <https://www.eecbg.energy.gov/informationcenter/>

# Idaho Office of Energy Resources

- Great source of energy eff. information for Idaho
- Hotline for connections to resources/programs
  - 1-800-334-SAVE
- Work with large companies on energy assessments; facilitate process & incentive funding
  - Work with/through third-party certified specialists
- Organizing DOE Steam Funda's Training Fall 2010
- Contact: Jeff Brooks, Industrial Efficiency Program
  - Phone: 208-287-4893, [jeff.brooks@oer.idaho.gov](mailto:jeff.brooks@oer.idaho.gov).
  - <http://www.energy.idaho.gov/energyefficiency/industrial.htm>

# Utility Resources – Avista Utilities

- Account Exec. available for each industrial customer
  - <http://www.avistautilities.com/business/accountexec/Pages/default.aspx>
- Account Executive works with customer to offer incentives and other technical services
  - [http://www.avistautilities.com/business/rebates/washington\\_idaho/Pages/default.aspx](http://www.avistautilities.com/business/rebates/washington_idaho/Pages/default.aspx)
- Available programs include:
  - Steam Trap Replacement/Repair Rebates
  - Variable Frequency Drive Incentives
  - Commercial Lighting Incentives
  - ...and more
- Contact: Ken Boni, Energy Solutions Manager
  - 509-495-8198, [ken.boni@avistacorp.com](mailto:ken.boni@avistacorp.com)

# Utility Resources – Idaho Power

- Commercial & Industrial Energy Efficiency page
  - <http://www.idahopower.com/EnergyEfficiency/Business>
- Building Efficiency (commercial construction)
  - Incentives of up to \$100,000 per project designed to offset part of additional capital expenses for more efficient lighting designs, cooling systems, controls and building shell in new commercial industrial construction projects.
- Custom Efficiency (complex projects)
  - Financial incentives for large commercial and industrial energy users who undertake complex projects to improve the efficiency of their electrical systems or process. Incentives of \$0.12/kWh up to 70 percent of the project cost. (Formerly known as the Industrial Efficiency program.)
- FlexPeak Management (demand response)
  - Recurring payments for reducing a set amount of electricity consumption in response to Idaho Power peak demand and other electrical system needs.
- Contact: Chris Pollow, PE, CEM
  - 208-388-5949, [cpollow@idahopower.com](mailto:cpollow@idahopower.com)

# Utility Resources - BPA

- Bonneville Power Administration's Energy Smart Industrial for Industrial Facilities
- BPA provides technical specialists to work with utilities and manufacturers to achieve energy savings
- Program began in October 2009
  - Goal of regional uniformity
  - Provides reimbursement incentives (pre-set)
- Any industrial firm with a utility serviced by BPA operates via BPA-affiliated utilities in Idaho, Montana, Oregon, Washington, Wyoming
  - e.g., Farmers Electric Coop, Idaho Falls Power, Kootenai Electric Coop, etc.
  - Contact made through local utility
  - Sectors include food processing, manufacturing, high tech, metal processing, and pulp and paper firms, among others.
- Contact: Jennifer Eskil, BPA Industrial Program Lead
  - 509-527-6232, [jleskil@bpa.gov](mailto:jleskil@bpa.gov)
  - <http://www.bpa.gov/energy/n/industrial/facilities.cfm>

# Incentives

- DOE State Incentives Database
  - [http://www1.eere.energy.gov/industry/states/state\\_activities/incentive\\_search.aspx](http://www1.eere.energy.gov/industry/states/state_activities/incentive_search.aspx)
- Industrial Energy Efficiency Directory (INDEED)
  - Incentives, but also collection of indu. energy info.
  - <http://indeed.govtools.us/home.aspx>
- DSIRE – Database of State Incentives for Renewables & Efficiency
  - <http://www.dsireusa.org/>



# Regional Training

- Northwest Energy Efficiency Alliance



- Searchable calendar for events/training

- <http://www.nwalliance.org/participate/calendar.aspx>

- 1-800-411-0834

|     |      |            |                      |       |                   |    |
|-----|------|------------|----------------------|-------|-------------------|----|
| May | 2010 | Industrial | Education / Training | Idaho | - Search Events - | GO |
|-----|------|------------|----------------------|-------|-------------------|----|

([Click here](#) to view this calendar as a monthly view.)

Thursday, May 20, 2010

[Industrial Refrigeration Systems Energy Management](#)

Industrial | Education / Training | Twin Falls, ID | 7:30 AM - 4:30 PM

Wednesday, May 26, 2010

[Variable Frequency Drives and Energy Efficiency](#)

Industrial | Education / Training | Boise, ID | 7:30 AM - 4:30 PM

Thursday, May 27, 2010

[Variable Frequency Drives and Energy Efficiency](#)

Industrial | Education / Training | Boise, ID | 7:30 AM - 4:30 PM

# Questions?

- Resources discussed available in a handout
- Slides available at:
  - [www.deq.idaho.gov/ghgworkshop](http://www.deq.idaho.gov/ghgworkshop) or,
  - [www.pprc.org](http://www.pprc.org)

*Opportunity is missed by most people  
because it is dressed in overalls and looks  
like work.*

*- Thomas A. Edison*

